

IRON SHIP. 21476

No. 4035 Survey held at Whitby Date, First Survey 9th Feb Last Survey 23 July 1898
 On the Lea St. "Floer" For Motor launch Master Frederic E. Morgan
 Tonnage under Tonnage Deck 1410.43 ONE, OR TWO DECKED, THREE DECKED VESSEL.
 Ditto of Main, Spar, or Awning Deck. 35.04 SPAR, OR AWNING-DECKED VESSEL.
 Ditto of Poop, or Revised Cr. Dk. 35.10 HALF BREADTH (moulded)... 16.5 Feet.
 Ditto of Houses on Deck 28.45 DEPTH from upper part of Keel to top of Upper Deck Beams 24.6 1/2
 Ditto of Forecastle 28.45 GIRTH of Half Midship Frame (as per Rule) 36.11
 Gross Tonnage 1509.40 1st NUMBER 77.10 1/2
 Less Crew Space 49.47 1st NUMBER, if a THREE-DECKED VESSEL 77
 Less Engine Room 483.01 LENGTH 70.10 1/2 [deduct 7 feet] 63.10 1/2
 Register Tonnage as cut on Beam 976.42 2nd NUMBER 17694
 PROPORTIONS—Breadths to Length 7 1/2 to 8
 Depths to Length—Upper Deck to Keel under 11
 Main Deck ditto 14

Official Number 19613

PLANS CASE

LENGTH on deck as per Rule 249 0 BREADTH—Moulded... 32 10 1/2 DEPTH top of Floors to Upper Deck Beams 22 9 Power of Engines 140 Horse. No. of Decks with flat laid Two No. of Tiers of Beams Three
 Dimensions of Ship per Register, length, 251 - breadth, 33 - depth, 23 -

	Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	9 x 2 1/2	9 x 2 1/2	FLAT KEEL PLATES, breadth and thickness	36	11/16	36	11/16				
STEM, moulding and thickness	9 x 2 1/2	9 x 2 1/2	PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	10/16	10/16	10/16	10/16				
STERN-POST for Rudder do. do.	9 x 4 3/4	8 1/2 x 5	" of doubling at Bilge, or increased thickness, and length applied	11/16	11/16	11/16	11/16				
" " for Propeller	9 x 4 3/4	8 1/2 x 5	" fm up. part of Bilge to l. edge of Sh'rstrake.	10/16	10/16	10/16	10/16				
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24	" Main Sheerstrake, breadth and thickness of doubling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	40	12/16	40	12/16				
FRAMES, Angle Iron, for 3/4 length amidships	4 1/2 x 3	4 1/2 x 3	" Up. or Spar Dk. Sh'rstrake, brdth & thickness	11/4	12 1/16	11/4	12 1/16				
Do. for 1/2 at each end	4 1/2 x 3	4 1/2 x 3	Butt Straps to outside plating, breadth & thickness	10 1/2	10 1/2	10 1/2	10 1/2				
REVERSED FRAMES, Angle Iron	3 x 3	3 x 3	Lengths of Plating	40	40	40	40				
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	2 1/2 x 9/16	2 1/2 x 9/16	Shifts of Plating, and Stringers	52	9/16	52	9/16				
" thickness at the ends of vessel	2 1/2 x 7/16	2 1/2 x 7/16	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16				
" depth at 3/4 the half-bdth. as per Rule	4 3	4 3	Angle Iron on ditto	26 x 9/16	26 x 9/16	26 x 9/16	26 x 9/16				
" height extended at the Bilges	7 x 7/16	7 x 7/16	Tie Plates fore and aft, outside Hatchways	13 1/2	13 1/2	13 1/2	13 1/2				
BEAMS, Upper, Spar, or Awning Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	2 1/2 x 2 1/2	2 1/2 x 2 1/2	Diagonal Tie Plates on Beams No. of Pairs	26 x 9/16	26 x 9/16	26 x 9/16	26 x 9/16				
Single or double Angle Iron on Upper edge	40	40	Planksheer material and scantling	4	4	4	4				
Average space	5 1/2	5 1/2	Waterways do. do.	4	4	4	4				
BEAMS, Main, or Middle Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	24	24	Flat of Upper Deck do. do.	4	4	4	4				
Single or double Angle Iron, on Upper Edge	9 x 9/16	9 x 9/16	How fastened to Beams	35 1/2	35 1/2	35 1/2	35 1/2				
Average space	4	4	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	35 1/2	35 1/2	35 1/2	35 1/2				
BEAMS, Lower Deck, Hold, or Orlop Single or double Ang. Iron, Plate or Tee Bulb Iron	10 x 12	10 x 12	Is the Stringer Plate attached to the outside plating?	Yes	Yes	Yes	Yes				
Single or double Angle Iron on Upper Edge	17 x 12	17 x 12	Angle Irons on ditto, No. 2	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16				
Average space	11	11	Tie Plates, outside Hatchways	12	12	12	12				
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates	5 x 4	5 x 4	Diagonal Tie Plates on Beams, No. of pairs	32	32	32	32				
" Rider Plate	2 1/2 x 9/16	2 1/2 x 9/16	Waterways materials and scantlings	5/8	5/8	5/8	5/8				
" Bulb Plate to Intercoastal Keelson	5 x 4	5 x 4	Flat of Middle Deck do. do.	32	32	32	32				
" Angle Irons	2 1/2 x 9/16	2 1/2 x 9/16	How fastened to Beams	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16				
" Double Angle Iron Side Keelson	5 x 4	5 x 4	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16				
" Side Intercoastal Plate	2 1/2 x 9/16	2 1/2 x 9/16	Is the Stringer Plate attached to the outside plating?	Yes	Yes	Yes	Yes				
" do. Angle Irons	5 x 4	5 x 4	Angle Irons on ditto, No. 2	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16				
" Attached to outside plating with angle iron	3 x 3	3 x 3	Stringer or Tie Plates, outside Hatchways	2 1/2	2 1/2	2 1/2	2 1/2				
BILGE Angle Irons	5 x 4	5 x 4	Flat of Lower Deck	2 1/2	2 1/2	2 1/2	2 1/2				
" do. Bulb Iron	0 x 0	0 x 0	Ceiling betwixt Decks, thickness and material	2 1/2	2 1/2	2 1/2	2 1/2				
" do. Intercoastal plates riveted to plating for length	5 x 4	5 x 4	" in hold do. do.	2 1/2	2 1/2	2 1/2	2 1/2				
BILGE STRINGER Angle Irons	2	2	Main piece of Rudder, diameter at head	6 1/4	6 1/4	6 1/4	6 1/4				
Intercoastal plates riveted to plating for length	2	2	" do. at heel	3 1/4	3 1/4	3 1/4	3 1/4				
SIDE STRINGER Angle Irons	2	2	Can the Rudder be unshipped afloat?	Yes	Yes	Yes	Yes				
Transoms, material. Knight-heads. Hawse Timbers.	Plates	Plates	Bulkheads No. 4 Thickness of	6/16	6/16	6/16	6/16				
Windlass	Harefield Patent	Harefield Patent	" Height up main deck from one to upper deck	3 x 3 x 7/16	3 x 3 x 7/16	3 x 3 x 7/16	3 x 3 x 7/16				
Pall Bitt			" How secured to sides of ship	3 x 3 x 7/16	3 x 3 x 7/16	3 x 3 x 7/16	3 x 3 x 7/16				
			" Size of Vertical Angle Irons	3 x 3 x 7/16	3 x 3 x 7/16	3 x 3 x 7/16	3 x 3 x 7/16				
			" Are the outside Plates doubled two spaces of Frames in length?	Yes	Yes	Yes	Yes				

The FRAMES extend in one length from Keel to gunwale Riveted through plates with 7/8 in. Rivets, about 6 apart.
 The REVERSED ANGLE IRONS on floors and frames extend across middle line to about main deck stringer and to gunwale alternately
 KEELSONS. Are the various lengths of Plates and Angle Irons properly connected? Yes And butts properly shifted? Yes
 PLATING. Garboard, double riveted to Keel, with rivets 1/8 in. diameter, averaging 4 7/8 ins. from centre to centre.
 " Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 7/8 in. diameter, averaging 3 7/8 ins. from centre to centre.
 " Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 7/8 in. diameter averaging 3 7/8 ins. from centre to centre.
 " Butts of three Strakes at Bilge for half length, treble riveted with Butt Straps 1/16 thicker than the plates they connect.
 " Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 7/8 in. diameter, averaging 3 7/8 ins. from cr. to cr.
 " Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 7/8 in. diameter, averaging 3 7/8 ins. from cr. to cr.
 " Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double or single riveted.
 " Butts of Main Sheerstrake, treble riveted for half length amidships. Butts of Upper or Spar Sheerstrake, treble riveted half length amidships.
 " Butts of Main Stringer Plate, treble riveted for half length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for half length.
 " Breadth of laps of plating in double riveting 5/4 Breadth of laps of plating in single riveting 5/4
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double & Treble
 Waterway, how secured to Beams (Explain by Sketch, if necessary.) held parallel to main & upper beams
 Beams of the various Decks, how secured to the sides? End of bulk plates turned & pinned No. of Breasthooks, Seven Crutches, Two
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Good
 Manufacturer's name or trade mark, West-Bradford, S. Harris, West-Bradford
 The above is a correct description.
 Builder's Signature, Thomas Turnbull & Co. Surveyor's Signature, S. P. Gledhill
 Surveyor to Lloyd's Register of British and Foreign Shipping.

180679-0336

See Surveyors Letter 18 Feb. 11 June 1890

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed*
Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? *Yes*
Are the fillings between the ribs and plates solid single pieces? *Solid pieces*
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? *Yes*
Are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? *Yes*
Do any rivets break into or through the seams or butts of the plating? *A few in butts* 21276 Jm

Masts, Bowsprit, Yards, &c., are *Iron & Pine* in *good* condition, and sufficient in size and length. If of Iron or Steel give Scantlings of Plating, Angle Irons, &c., and further explain by a Sketch showing how the lower Masts and Bowsprit are constructed, showing the number of Plates and Angle Irons, mode of riveting, quality of Materials, and if stamped with Maker's name.

State also Length and Diameter of Lower Masts and Bowsprit *Masts made with three plates in the round 6 1/16 at wedging*
lapped away to 5 1/16 head & heel length of main mast 66ft-2. Diameter heel 15 1/2 feet 22 1/2 round 16.
head 14. Fore mast 73 ft. 1. Diameter heel 9 1/2 feet 22. Round 17 head 15 Double riveted at edges treble
at butts. Masts doubled at wedging. Iron tested as per scale & found good. Branded S. P. M.

NUMBER for EQUIPMENT		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule.	Test req'd per Rule.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate	Wght req'd per Rule.	Test req'd per Rule.
SAILS.							Bowers	3	20-0-3	27-4-1-1/4	27-3-0	26-10-0-0
Fore Sails,	CABLES, &c. Chain	270	1 1/4	5 1/4	270 fathoms	5 1/4			27-2-2	26-16-3-1/4	27-3-0	26-10-0-0
Fore Top Sails,	at Rehester	31	1 1/2	4	1070				23-3-20	23-17-2-0	23-2-10	23-11-0-0
Fore Topmast Stay Sails	D. S. Lewis											
Main Sails,	Hmpa Strm Cbl	75	1 1/2	20-6-0-0								
Main Top Sails,	Hawser ...	80	7 1/2				Stream	1	11-0-2	11-4-2-2	11-0-0	
and	Towlines ...	80	9 1/2				Kedges	2	5-3-9	7-7-2-0	5-2-0	
	Warp ...	80	6 1/2						2-3-20	4-17-2-0	2-3-0	
	quality good	80	5 1/2									

Standing and Running Rigging *Misc & Hemp* sufficient in size and *good* in quality. She has *Four* Long Boats and *Good*
The Windlass is *Good* Capstan *Good* (2) and Rudder *Good* Pumps *Four of 6 in Metal*
Engine Room Skylights. How constructed? *Iron & casing to top* How secured in ordinary weather? *Rolls up*
What arrangements for deadlights in bad weather? *Rolls up*
Coal Bunker Openings. How constructed? *Iron & casing* How are lids secured? *Wires* Height above deck? *19 inches*
Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *Rolls up*

Cargo Hatchways. How formed? *7 1/16 Plate*
State size Main Hatch *20x12 ft. Comings 32 in* Fore hatch *12x12 ft. Comings 33* Quarter hatch *20x12 ft. Comings 32 inches*
If of extraordinary size, state how framed and secured?
What arrangement for shifting beams? *One shifting web beam in each long hatchway*
Hatches, If strong and efficient? *Strong & good*

Order for Special Survey No. <i>601</i>	DATES of Surveys held while building as per Section 18.	1st. On the several parts of the frame, when in place, and before the plating was wrought	Special Survey Date of Survey 1890	
Date <i>26 Feb. 1890</i>		2nd. On the plating during the process of riveting	<i>Feb. 9. 23. March 7. 18. 21. April 5. 24. May</i>	
Order for Ordinary Survey No.		3rd. When the beams were in and fastened, and before the decks were laid ...	<i>4-11-13-16-23 June 1-6-12-22 July 10-12-19-23</i>	
Date		4th. When the ship was complete, and before the plating was finally coated or cemented..		
No. <i>50</i> in builder's yard.		5th. After the ship was launched and equipped		

General Remarks (State quality of workmanship, &c.) *Workmanship & material good*
Is fitted with a Forecastle Bridge & Deckhouse. Forecastle frames all to the top height beams
of bulk 6 1/2 + 4 1/4 Double Angles on top edges 3+3+6 1/16. Stringer plates on ends 24+6 1/16 Angles on Jo.
3+3+7 1/16 tie plates 9+6 1/16. Plating outside 6 1/16 Deck 3 1/4 Pine
Water ballast tanks fitted in fore & after hold. frames cut connection made with three
plates side plates 7 1/16 Angles on Jo. 3 1/2 + 3 1/2 + 7 1/16 Mid plates 6 1/16 Angles on Jo. 3+3+6 1/16. Plating
6 1/16 tested by a head of water to the height of load line.

Thomas Gurnell & Son

State if one, two, or three decked vessel, or if spar, or awning decked, and the lengths of poop, forecabin, or raised quarter deck, and the length of double, or part double bottom.
How are the surfaces preserved from oxidation? Inside *Plashed with Portland Cement* Outside *& other parts with paint*

I am of opinion this Vessel should be Classed *100 A1*
The amount of the Entry Fee ... £ *5 : 0 : 0* is received by me, *S. P. M.*
Special ... £ *61 : 9 : 6* - *27 July 1878*
Certificate ...
(Travelling Expenses, if any, £ *20.9*)

Committee's Minute *30th July. 1878.*
Character assigned *100 A1*
Lloyd's Reg *dbl bot 12ft-2 Dks Iron*
3 In Bow 11ft-0
Double Bottom Foundation
29/7/78

This vessel appears eligible to be classed 100 A1 a recommended
Lloyd's Register